CLAIMS

What is claimed is:

1. A method of servicing a well bore, comprising: displacing a servicing fluid comprising a thermally activated viscosification compound into the well bore, wherein a viscosity of the servicing fluid increases as it passes down the well bore due to its temperature increasing.

2. The method of claim 1, wherein the thermally activated viscosification compound forms a thermally reversible gel as it passes down the well bore due to its temperature increasing.

3. The method of claim 1, wherein the thermally activated viscosification compound forms a thermally irreversible gel as it passes down the well bore due to its temperature increasing.

4. The method of claim 1, wherein the servicing fluid comprises a cement slurry, a drilling fluid, a gravel packing fluid, a fracturing fluid, a completion fluid, a work-over fluid, or combinations thereof.

5. The method of claim 1, wherein the thermally activated viscosification compound comprises a water-soluble hydrophobically modified polymer comprising a hydrophobic substituent having from about 1 to about 22 carbon atoms.

6. The method of claim 5, wherein the hydrophobically modified polymer is non-ionic.

7. The method of claim 6, wherein the non-ionic hydrophobically modified polymer comprises alkyl hydroxyl alkylcellulose, methyl cellulose ether, hydroxypropyl methyl cellulose ether, hydroxypropyl cellulose ether, copolymers of N-alkylacrylamides and hydrophilic comonomers, copolymers of N,N-dimethylacrylamides and alkoxyalkyl or alkyl acrylates, ethyleneoxide-propyleneoxide-ethyleneoxide tri-block polymers, poly(ethyleneglycol-(DL-lactic acid)-ethyleneglycol) triblock copolymersor, or combinations thereof.

8. The method of claim 6, wherein the servicing fluid further comprises an ionic surfactant, an inorganic salt, or combinations thereof.

9. The method of claim 5, wherein the hydrophobically modified polymer is ionic.

10. The method of claim 9, wherein the ionic hydrophobically modified polymer comprises copolymers of N-alkylacrylamides and ionic monomers, copolymers of stearylacrylate and acrylic acid, terpolymers of N-isopropylacrylamide, trimethyl acrylamidopropyl ammonium iodide, and 3-dimethyl- (methacryloxyethyl) ammonium propane sulfonate, copolymers of N-tertiarybutylacrylamide or N-isopropylacrylamide and 2-acrylamide-2-methyl propane sulfonic acid, poly(ethyleneoxide)-block-poly(propyleneoxide)-block-poly(ethyleneoxide) grafted with poly(sodium acrylate); hydrophobically modified poly(sodium acrylate), a copolymer of N-vinylcaprolactam and sodium acrylate, or combinations thereof.

11. The method of claim 9, wherein the servicing fluid further comprises a non-ionic surfactant, an inorganic salt, or combinations thereof.

12. The method of claim 4, wherein a viscosity of the servicing fluid is effective to suspend solids therein when the servicing fluid is in the well bore.

13. The method of claim 4, wherein the servicing fluid further comprises an encapsulated salt that is released downhole to reduce a temperature of the servicing fluid and thereby reduce a viscosity of the servicing fluid.

14. The method of claim 13, wherein the servicing fluid comprises a fracturing fluid, and wherein the encapsulated salt is released after using the servicing fluid to fracture the subterranean formation.

15. The method of claim 1, further comprising flowing the servicing fluid back to the surface of the earth.

16. The method of claim 15, wherein the viscosity of the servicing fluid is effective to suspend drill cuttings therein as the servicing fluid flows to the surface of the earth.

17. The method of claim 16, further comprising allowing the viscosity of the servicing fluid to decrease at the surface due to its temperature decreasing, thereby causing the drill cuttings to settle.

18. The method of claim 1, wherein the thermally activated viscosification compound comprises a chemically crosslinked gel-forming compound, a physically crosslinked gel-forming compound, or combinations thereof.

19. The method of claim 1, wherein the thermally activated viscosification compound comprises a linear polymer that is capable of being physically crosslinked.

20. The method of claim 1, wherein an amount of the thermally activated viscosification compound present in the servicing fluid ranges from about 0.1% to about 5% by total weight of the servicing fluid.

21. A well bore servicing fluid comprising a thermally activated viscosification compound.

22. The well bore servicing fluid of claim 21, wherein the servicing fluid comprises a cement slurry, a drilling fluid, a gravel packing fluid, a fracturing fluid, or combinations thereof.

23. The well bore servicing fluid of claim 21, wherein the thermally activated viscosification compound comprises a water-soluble, hydrophobically modified polymer comprising a hydrophobic substituent having from about 1 to about 22 carbon atoms.

24. The well bore servicing fluid of claim 23, wherein the hydrophobically modified polymer is non-ionic.

25. The well bore servicing fluid of claim 24, wherein the servicing fluid further comprises an ionic surfactant, an inorganic salt, or combinations thereof.

26. The well bore servicing fluid of claim 23, wherein the hydrophobically modified polymer is ionic.

27. The well bore servicing fluid of claim 26, wherein the servicing fluid further comprises a non-ionic surfactant, an inorganic salt, or combinations thereof.

28. The well bore servicing fluid of claim 21, wherein a viscosity of the servicing fluid is effective to suspend solids therein when the servicing fluid is in the well bore.

29. The well bore servicing fluid of claim 21, wherein the servicing fluid further comprises an encapsulated salt that is capable of being released downhole for reducing a temperature of the servicing fluid and thereby reducing a viscosity of the servicing fluid.

30. The well bore servicing fluid of claim 29, wherein the encapsulated salt comprises an ammonium salt, a sodium salt, a potassium salt, or combinations thereof.

31. The well bore servicing fluid of claim 21, wherein a viscosity of the servicing fluid is effective to suspend drill cuttings therein when the servicing fluid is pumped from the subterranean formation to near the surface of the earth.

32. The well bore servicing fluid of claim 21, wherein the thermally activated viscosification compound is capable of forming a chemically crosslinked gel, a physically crosslinked gel, or combinations thereof.

33. The well bore servicing fluid of claim 21, wherein the thermally activated viscosification compound comprises a linear polymer that capable of forming a physically crosslinked gel.

34. The well bore servicing fluid of claim 21, wherein the thermally activated viscosification compound is capable of forming a thermally reversible gel.

35. The well bore servicing fluid of claim 21, wherein an amount of the thermally activated viscosification compound present in the servicing fluid ranges from about 0.1% to about 5% by total weight of the servicing fluid.

36. A well bore servicing fluid comprising a thermally activated viscosification compound that is capable of forming a thermally reversible gel.